



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/367,829	08/23/1999	ATSUYA KUME	1137-788	4817

7590 12/06/2001

ROTHWELL FIGG ERNST & KURZ
555 13TH STREET NW
WASHINGTON, DC 20004

EXAMINER

LE, LANA N

ART UNIT PAPER NUMBER

2684

DATE MAILED: 12/06/2001

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/367,829

Applicant(s)

KUME, ATSUYA

Examiner

Lana Le

Art Unit

2684

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 September 2001.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 14-18 is/are allowed.
- 6) ☒ Claim(s) 8-10, 12, 13, 19-21, 23 and 24 is/are rejected.
- 7) ☐ Claim(s) 11 and 22 is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____

RESPONSE TO AMENDMENT

Response to Arguments

1. Applicant's arguments filed 9/12/2001 have been fully considered but they are not persuasive.

The adjustment of the threshold is in response to failed attempts at handoff (column 24, lines 5-10) as the claimed subject matter in which "the threshold is lowered when the handover operation fails to transfer the call the another base station". The remote unit's central processor must determine which channel has the highest quality ranking, and compares and determines if the threshold is violated and send the control to the original threshold if it is not violated, and send the control to adjust the threshold if it is violated (col 15, lines 63 – 67; col 25, lines 49-61). Different thresholds such as signal strength level threshold or bit error rate threshold are lowered for better reception quality and coverage (col 3, lines 23-50).

Claim Rejections - 35 USC 112

2. Claims 9-13 recites the limitation "as set forth in claim 1" in the canceled claim 1 . There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

1. Claims 8, 9, 19, 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Balachandran (US 5,594,943).

Regarding claim 8, Balachandran discloses a radio communication system comprising: a radio unit connected to a transmitter-receiver antenna 550 (fig 5B2); the radio unit measuring a field intensity level and a circuit quality value (parameters RSSI, BER, etc.) of a radio communication signal of a call received from a base station (col 23, lines 30-65); and a control unit 522 (fig. 5B1) which compares either or both of field intensity level and circuit quality measured by the radio unit with thresholds, and gives a handover instruction to the radio unit to start a handover to transfer the call to another base station 54 if the channel that can be acquired does not violate the threshold based on the measured field intensity level or the measured circuit quality, and lowers the default threshold when a handover operation is unsuccessfully executed (see fig. 20, col 25, lines 33-61).

Regarding claim 9, Balachandran discloses the radio communication system according to claim 1, wherein the control unit restores the at least one default threshold upon successful transfer of the call to another base station (col 25, lines 49-52).

Regarding claim 19, Balachandran discloses a method for controlling transfer of a radio communication signal of a call to a radio communication apparatus from one base station to another base station, comprising the steps of: measuring a field intensity level and a circuit quality value of a radio communication signal of a call received from said one base station (col 3, lines 23-42); comparing either or both of the measured field intensity level and circuit quality value with respective predefined thresholds (col 23, lines 30-65); commencing a handover operation to transfer said call to another base station if at least one of said measured field intensity level and said circuit quality value is below its respective threshold; and when said handover operation fails to transfer said call to another base station, lowering at least one of said thresholds (see fig. 20, col 25, lines 33-61).

Regarding claim 20, Balachandran discloses a method as set forth in claim 19, further comprising the step of restoring said at least one default threshold upon successful transfer of said call to another base station (col 25, lines 49-52).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 10, 12-13, 21, 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Balachandran in view of Blasiak et al (US 5,711,004).

Regarding claim 10, Balachandran didn't disclose a radio communication system as set forth in claim 1, further comprising selecting means for enabling a user to selectively inhibit changing of a default threshold by said control unit. Blasiak discloses a radio communication system as set forth in claim 1, further comprising selecting means for enabling a user to selectively inhibit changing of a default threshold by said control unit (col 3, lines 63-66; col 5, lines 24-25). It would have been obvious to one of ordinary skill in the art at the time the invention was made to add the user defined threshold to leave the adjusting of the threshold as static or variable up to the user.

Regarding claim 12, Blasiak discloses radio communication system as set forth in claim 1, wherein said control unit accepts an instruction from a user to inhibit a handover operation regardless of the result of comparison of said measured field intensity level and said circuit quality value with said thresholds (col 5, lines 11-15). It would have been obvious to one of ordinary skill in the art at the time the invention was made to allow the user to choose not to permit handoff by adjusting the threshold to a base value.

Regarding claim 13, Blasiak discloses radio communication system as set forth in claim 1, wherein said control unit accepts an instruction from a user to execute a handover operation regardless of the result of comparison of said measured field intensity level and said circuit quality value with said thresholds (col 5, lines 24-30). It would have been obvious to one of ordinary skill in the art at the time the invention was made to allow the user to demand a forced handoff to occur at whichever point that the user prefers.

Regarding claim 21, Blasiak et al discloses the method as set forth in claim 19, further comprising the step of enabling a user to selectively inhibit changing of a default threshold (col 3, lines 63-66; col 5, lines 24-25). It would have been obvious to one of ordinary skill in the art at the time the invention was made to add the user defined threshold to leave the adjusting of the threshold as static or variable up to the user.

Regarding claim 23, Blasiak et al discloses the method as set forth in claim 19, further comprising the step of accepting an instruction from a user to inhibit a handover operation regardless of the result of comparison of said measured field intensity level and said circuit quality value with said thresholds (col 5, lines 11-15). It would have been obvious to one of ordinary skill in the art at the time the invention was made to allow the user to choose not to permit handoff by adjusting the threshold to a base value.

Regarding claim 24, Blasiak et al discloses the method as set forth in claim 19, further comprising the step of accepting an instruction from a user to execute a handover operation regardless of the result of comparison of said measured field intensity level and said circuit quality value with said thresholds (col 5, lines 24-30). It would have been obvious to one of ordinary skill in the art at the time the invention was made to allow the user to demand a forced handoff to occur at whichever point that the user prefers.

Allowable Subject Matter

4. The following is an examiner's statement of reasons for allowance:

Regarding claim 14, Balachandran discloses a method for controlling transfer of a radio communication signal of a call to a radio communication apparatus from one base station to another base station, comprising the steps of: measuring a field intensity level and a circuit quality value of a radio communication signal of a call received from said one base station; comparing either or both of the measured field intensity level and circuit quality value with respective predefined thresholds; commencing a handover operation to transfer said call to another base station if at least one of said measured field intensity level and said circuit quality value is below its respective threshold.

However, the cited prior art fails to disclose further commencing a handover after at least a default inhibit time has passed since a last handover operation; and when the handover operation fails to transfer the call to another base station, increasing the default inhibit time.

3. Claims 15-17 are allowable due to their dependency on claim 14.

Regarding claim 18, Balachandran discloses a method for controlling transfer of a radio communication signal of a call to a radio communication apparatus from one base station to another base station, comprising the steps of: measuring a field intensity level and a circuit quality value of a radio communication signal of a call received from said one base station; comparing either or both of the measured field intensity level and circuit quality value with respective predefined thresholds; commencing a handover operation to transfer said call to another base station if at least one of said measured

field intensity level and said circuit quality value is below its respective threshold (col 23, lines 33-61).

However, the cited prior art fails to disclose further commencing a handover after at least a default inhibit time has passed since a last handover operation; determining when said handover operation occurs more than a predefined number of times in a predefined period of time; and when said handover operation occurs more than said predefined number of times within a predefined period of time, lowering at least one of said thresholds.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

4. Claims 11 and 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Douzono et al (US 5,574,983), Base station device and mobile station device in mobile communication system utilizing the site diversity effect in soft handover state.

8. Any response to this action should be mailed to:

Art Unit: 2684

- Kanai (US 5,239,667), Method of Controlling Handoff in Cellular Mobile Radio Cellular Mobile Radio Communication System.
- Bodin et al (US 5,241,685), Load Sharing control for a Mobile Cellular Radio System.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

8. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for formal communications intended for entry)

and:

(for informal or draft communications, please label

"PROPOSED" or "DRAFT"

Hand-delivered responses should be brought to the Crystal Park II, 2021 Crystal Drive, Arlington VA, Sixth Floor (Receptionist).

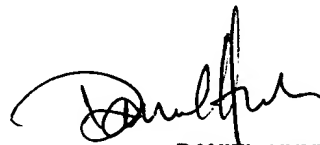
Any inquiry concerning this communication or communications from the examiner should be directed to Lana Le whose telephone number is (703) 308-5836 and to the supervisory patent examiner Daniel Hunter whose telephone number is (703) 308-6732.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3900.

With Regards,

Lana Le

November 26, 2001



DANIEL HUNTER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600